- 1 -

SEQUENCE LISTING

<110> Bayer AG

<120> Regulation of Human BMP2 Inducible Kinase

<130> 004974.00851

<150> US 60/367,512
<151> 2002-03-27

<150> US 60/406,936
<151> 2002-08-30

<160> 9

<170> FastSEQ for Windows Version 4.0

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<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

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Gly Ser Gly Gly Ser Ser Val Gly Val Arg Val Phe Ala Val Gly Arg
        35                  40                  45
His Gln Val Thr Leu Glu Glu Ser Leu Ala Glu Gly Gly Phe Ser Thr
    50                  55                  60
Val Phe Leu Val Arg Thr His Gly Gly Ile Arg Cys Ala Leu Lys Arg
65                  70                  75                  80
Met Tyr Val Asn Asn Met Pro Asp Leu Asn Val Cys Lys Arg Glu Ile
                85                  90                  95
Thr Ile Met Lys Glu Leu Ser Gly His Lys Asn Ile Val Gly Tyr Leu
            100                 105                 110
Asp Cys Ala Val Asn Ser Ile Ser Asp Asn Val Trp Glu Val Leu Ile
        115                 120                 125
Leu Met Glu Tyr Cys Arg Ala Gly Gln Val Val Asn Gln Met Asn Lys
    130                 135                 140
Lys Leu Gln Thr Gly Phe Thr Glu Pro Glu Val Leu Gln Ile Phe Cys
145                 150                 155                 160
Asp Thr Cys Glu Ala Val Ala Arg Leu His Gln Cys Lys Thr Pro Ile
                165                 170                 175
Ile His Arg Asp Leu Lys Val Glu Asn Ile Leu Leu Asn Asp Gly Gly
            180                 185                 190
Asn Tyr Val Leu Cys Asp Phe Gly Ser Ala Thr Asn Lys Phe Leu Asn
            195                 200                 205
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Thr Thr Leu Ser Tyr Arg Ala Pro Glu Met Ile Asn Leu Tyr Gly Gly
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Lys Pro Ile Thr Thr Lys Ala Asp Ile Trp Ala Leu Gly Cys Leu Leu
            245                 250                 255
Tyr Lys Leu Cys Phe Phe Thr Leu Pro Phe Gly Glu Ser Gln Val Ala
            260                 265             270
Ile Cys Asp Gly Asn Phe Thr Ile Pro Asp Asn Ser Arg Tyr Ser Arg
        275             280                 285
Asn Ile His Cys Leu Ile Arg Phe Met Leu Glu Pro Asp Pro Glu His
    290             295                 300
Arg Pro Asp Ile Phe Gln Val Ser Tyr Phe Ala Phe Lys Phe Ala Lys
305             310                 315             320
Lys Asp Cys Pro Val Ser Asn Ile Asn Asn Ser Ser Ile Pro Ser Ala
            325                 330                 335
Leu Pro Glu Pro Met Thr Ala Ser Glu Ala Ala Ala Arg Lys Ser Gln
            340                 345             350
Ile Lys Ala Arg Ile Thr Asp Thr Ile Gly Pro Thr Glu Thr Ser Ile
    355             360                 365
Ala Pro Arg Gln Arg Pro Lys Ala Asn Ser Ala Thr Thr Ala Thr Pro
    370             375                 380
Ser Val Leu Thr Ile Gln Ser Ser Ala Thr Pro Val Lys Val Leu Ala
385             390                 395             400
Pro Gly Glu Phe Gly Asn His Arg Pro Lys Gly Ala Leu Arg Pro Gly
            405             410                 415
Asn Gly Pro     Ile Leu Leu Gly Gln Gly Pro Pro Gln Gln Pro Pro
                    425                 430
Gln Gln His     Val Leu Gln Gln Leu Gln Gln Gly Asp Trp Arg Leu
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Gln Gln Leu His Leu Gln His Arg His Pro His Gln Gln Gln Gln Gln
    450             455                 460
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
465             470                 475                 480
Gln Gln Gln Gln Gln Gln His His His His His His His His Leu Leu
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Gln Asp Ala Tyr Met Gln Gln Tyr Gln His Ala Thr Gln Gln Gln Gln
            500             505                 510
Met Leu Gln Gln Gln Phe Leu Met His Ser Val Tyr Gln Pro Gln Pro
            515             520             525
Ser Ala Ser Gln Tyr Pro Thr Met Met Pro Gln Tyr Gln Gln Ala Phe
    530             535             540
Phe Gln Gln Gln Met Leu Ala Gln His Gln Pro Ser Gln Gln Gln Ala
545             550                 555                 560
Ser Pro Glu Tyr Leu Thr Ser Pro Gln Glu Phe Ser Pro Ala Leu Val
            565             570                 575
Ser Tyr Thr Ser Ser Leu Pro Ala Gln Val Gly Thr Ile Met Asp Ser
            580             585                 590
Ser Tyr Ser Ala Asn Arg Gln Val Phe Phe Gln Ser Val Ala Asp Lys
    595             600             605
Glu Ala Ile Ala Asn Phe Thr Asn Gln Lys Asn Ile Ser Asn Pro Pro
    610             615                 620
Asp Met Ser Gly Trp Asn Pro Phe Gly Glu Asp Asn Phe Ser Lys Leu
625             630                 635                 640
Thr Glu Glu Glu Leu Leu Asp Arg Glu Phe Asp Leu Leu Arg Ser Asn
            645                 650             655
Arg Leu Glu Glu Arg Ala Ser Ser Asp Lys Asn Val Asp Ser Leu Ser
            660             665                 670
Ala Pro His Asn His Pro Pro Glu Asp Pro Phe Gly Ser Val Pro Phe
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- 4 -

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Ile Ser His Ser Gly Lys Gly Ser Pro Glu Lys Lys Ala Glu His Ser
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Thr Ser Pro Ala Ser Lys Asp Gln Arg Thr Gly Lys Lys Thr Ser Val
                725   730   735
Gln Gly Gln Val Gln Lys Gly Asn Asp Glu Ser Glu Ser Asp Phe Glu
                740   745   750
Ser Asp Pro Pro Ser Pro Lys Ser Ser Glu Glu Glu Gln Asp Asp
        755   760   765
Glu Glu Val Leu Gln Gly Glu Gln Gly Asp Phe Asn Asp Asp Asp Thr
    770   775   780
Glu Pro Glu Asn Leu Gly His Arg Pro Leu Leu Met Asp Ser Glu Asp
785   790   795   800
Glu Glu Glu Glu Glu Lys His Ser Ser Asp Ser Asp Tyr Glu Gln Ala
                805   810   815
Lys Ala Lys Tyr Ser Asp Met Ser Ser Val Tyr Arg Asp Arg Ser Gly
        820   825   830
Ser Gly Pro Thr Gln Asp Leu Asn Thr Ile Leu Leu Thr Ser Ala Gln
        835   840   845
Leu Ser Ser Asp Val Ala Val Glu Thr Pro Lys Gln Glu Phe Asp Val
    850   855   860
Phe Gly Ala Val Pro Phe Phe Ala Val Arg Ala Gln Gln Pro Gln Gln
865   870   875   880
Glu Lys Asn Glu Lys Asn Leu Pro Gln His Arg Phe Pro Ala Ala Gly
                885   890   895
Leu Glu Gln Glu Glu Phe Asp Val Phe Thr Lys Ala Pro Phe Ser Lys
        900   905   910
Lys Val Asn Val Gln Glu Cys His Ala Val Gly Pro Glu Ala His Thr
        915   920   925
Ile Pro Gly Tyr Pro Lys Ser Val Asp Val Phe Gly Ser Thr Pro Phe
    930   935   940
Gln Pro Phe Leu Thr Ser Thr Ser Lys Ser Glu Ser Asn Glu Asp Leu
945   950   955   960
Phe Gly Leu Val Pro Phe Asp Glu Ile Thr Gly Ser Gln Gln Gln Lys
                965   970   975
Val Lys Gln Arg Ser Leu Gln Lys Leu Ser Ser Arg Gln Arg Arg Thr
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Lys Gln Asp Met Ser Lys Ser Asn Gly Lys Arg His His Gly Thr Pro
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Thr Ser Thr Lys Lys Thr Leu Lys Pro Thr Tyr Arg Thr Pro Glu Arg
    1010   1015   1020
Ala Arg Arg His Lys Lys Val Gly Arg Arg Asp Ser Gln Ser Ser Asn
1025   1030   1035   1040
Glu Phe Leu Thr Ile Ser Asp Ser Lys Glu Asn Ile Ser Val Ala Leu
                1045   1050   1055
Thr Asp Gly Lys Asp Arg Gly Asn Val Leu Gln Pro Glu Glu Ser Leu
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Leu Asp Pro Phe Gly Ala Lys Pro Phe His Ser Pro Asp Leu Ser Trp
        1075   1080   1085
His Pro Pro His Gln Gly Leu Ser Asp Ile Arg Ala Asp His Asn Thr
    1090   1095   1100
Val Leu Pro Gly Arg Pro Arg Gln Asn Ser Leu His Gly Ser Phe His
1105   1110   1115   1120
Ser Ala Asp Val Leu Lys Met Asp Asp Phe Gly Ala Val Pro Phe Thr
            1125   1130   1135
Glu Leu Val Val Gln Ser Ile Thr Pro His Gln Ser Gln Gln Ser Gln
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<211> 3704
<212> DNA
<213> Homo sapiens

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<213> Mus musculus

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        35                 40                 45
Thr Leu Glu Glu Ser Leu Ala Glu Gly Gly Phe Ser Thr Val Phe Leu
    50                 55                 60
Val Arg Thr His Ser Gly Ile Arg Cys Ala Leu Lys Arg Met Tyr Val
65                 70                 75                 80
Asn Asn Thr Pro Asp Leu Asn Ile Cys Lys Arg Glu Ile Thr Ile Met
                85                 90                 95
Lys Glu Leu Ser Gly His Lys Asn Ile Val Gly Tyr Leu Asp Cys Ala
            100                105                110
Val Asn Ser Ile Ser Asp Asn Val Trp Glu Val Leu Ile Leu Met Glu
        115                120                125
Tyr Cys Arg Ala Gly Gln Val Val Asn Gln Met Asn Lys Lys Leu Gln
    130                135                140
Thr Gly Phe Thr Glu Ser Glu Val Leu Gln Ile Phe Cys Asp Thr Cys
145                150                155                160
Glu Ala Val Ala Arg Leu His Gln Cys Lys Thr Pro Ile Ile His Arg
                165                170                175
Asp Leu Lys Val Glu Asn Ile Leu Leu Asn Asp Ala Gly Asn Tyr Val
            180                185                190
Leu Cys Asp Phe Gly Ser Ala Thr Asn Lys Phe Leu Asn Pro Gln Lys
        195                200                205
Asp Gly Val Asn Val Val Glu Glu Ile Lys Lys Tyr Thr Thr Leu
    210                215                220
Ser Tyr Arg Ala Pro Glu Met Ile Asn Leu Tyr Gly Gly Lys Pro Ile
225                230                235                240
Thr Thr Lys Ala Asp Ile Trp Ala Leu Gly Cys Leu Leu Tyr Lys Leu
                245                250                255
Cys Phe Phe Thr Leu Pro Phe Gly Glu Ser Gln Val Ala Ile Cys Asp
            260                265                270
Gly Ser Phe Thr Ile Pro Asp Asn Ser Arg Tyr Ser His Asn Val His
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305                 310             315                 320
Pro Val Ser Asn Ile Asn Asn Ser Phe Leu Pro Ser Thr Leu Pro Glu
                325                 330             335
Pro Met Thr Ala Thr Glu Ala Ala Ala Arg Lys Ser Gln Met Lys Ala
            340                 345             350
Arg Ile Thr Asp Thr Ile Gly Pro Thr Glu Thr Ser Ile Ala Pro Arg
        355                 360             365
Gln Arg Pro Lys Ala Asn Ser Thr Ala Ala Thr Ser Ser Val Leu Thr
    370             375             380
Ile Gln Ser Ser Ala Thr Pro Val Lys Val Pro Ala Pro Gly Glu Phe
385             390             395                 400
Ser Asn His Lys Pro Lys Gly Ala Leu Arg Pro Gly Asn Gly Ser Glu
            405             410             415
Val Leu Met Val Gln Gly Pro Pro Gln Gln Pro Pro Gln Gln His Arg
        420             425             430
Val Leu Gln Gln Leu Gln Gln Gly Asp Trp Arg Leu Gln Gln Leu His
    435             440             445
Leu His Arg His Pro His His His His Gln Gln Gln Gln Gln Gln Gln
450                 455             460
Gln Gln Gln Gln Gln Gln Gln Leu Gln Gln Gln Gln Gln Gln Gln Gln
465             470             475                 480
Gln Leu Leu Gln Asn Ala Tyr Leu Gln Gln Tyr Gln His Ala Met His
            485             490             495
Gln Gln His Ile Leu Gln Gln Gln Phe Leu Met His Ser Val Tyr Gln
        500             505             510
Pro Gln Pro Pro Leu Ser Gln Tyr Pro Ala Met Met Gln Gln Tyr Gln
    515             520             525
Gln Ala Phe Leu Gln Gln Gln Met Leu Ala Arg His Gln Gln Pro Ala
    530             535             540
Gln Gln Val Ser Pro Glu Tyr Leu Thr Ser Pro Gln Glu Phe Ser Pro
545             550             555             560
Ala Leu Val Ser Tyr Ala Ser Ser Leu Pro Ala Gln Val Gly Thr Ile
            565             570             575
Val Asp Ser Ser Tyr Gly Ala Asn Arg Ser Val Ala Glu Lys Glu Ala
        580             585             590
Val Ala Asn Phe Thr Asn Gln Lys Thr Ile Ser His Pro Pro Asp Met
        595             600             605
Ser Gly Trp Asn Pro Phe Gly Glu Asp Asn Phe Ser Lys Leu Thr Glu
    610             615             620
Glu Glu Leu Leu Asp Arg Glu Phe Asp Leu Leu Arg Ser Asn Arg Leu
625             630             635                 640
Gly Ala Ser Thr Pro Ser Asp Lys Thr Val Asp Leu Pro Pro Ala Pro
            645             650             655
His Ser Arg Pro Pro Glu Glu Pro Phe Ala Ser Val Pro Phe Ile Ser
        660             665             670
His Ser Gly Ser Pro Glu Lys Lys Thr Thr Glu His Ser Pro Asn Gln
    675             680             685
Lys Ser Ile Thr Ala Asn Leu Thr Lys Asn Gly Gly Ser Ser Pro Leu
    690             695             700
Cys Lys Asp Gln Arg Ala Gly Lys Lys Thr Ser Glu Asn Pro Val Ile
705             710             715                 720
Arg Gly Gln Val Gln Lys Gly His Asp Asp Ser Glu Ser Asp Phe Glu
            725             730             735
Ser Asp Pro Pro Ser Pro Lys Ser Ser Glu Glu Glu Gln Glu Asp Glu
            740             745             750
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-8-

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Asp Ala Gln Gly Glu His Gly Asp Phe Asn Asp Asp Asp Thr Glu Pro
        755             760             765
Glu Asn Leu Gly His Arg Pro Leu Leu Met Asp Ser Glu Asp Glu Glu
    770             775             780
Glu Asp Asp Lys His Ser Ser Asp Ser Glu Cys Glu Gln Ala Lys Thr
785             790             795             800
Lys Arg Gly Asp Thr Ser Ser Leu Arg Arg Asp Lys Pro Gly Val Ala
            805             810             815
Pro Asp Thr Ala Leu Leu Thr Pro Ala Arg Ser Pro Ala Asp Ala Leu
        820             825             830
Thr Pro Ser Gln Glu Phe Asp Val Phe Gly Ala Val Pro Phe Phe Ala
        835             840             845
Ala Pro Ala Pro Gln Ser Leu Gln His Arg Gly Asp Gly Lys Asn Leu
850             855             860
Ser Gln His Ala Phe Pro Glu Gln Glu Asp Phe Asp Val Phe Thr Lys
865             870             875             880
Ala Pro Phe Asn Lys Lys Val Ser Val Gln Asp Trp Pro Ala Val Gly
            885             890             895
Pro Asp Ala Arg Pro Leu Pro Ala Arg Pro Arg Ser Val Asp Ile Phe
            900             905             910
Gly Ser Thr Pro Phe Gln Pro Phe Ser Val Ser Ala Ser Lys Ser Glu
        915             920             925
Ser Lys Glu Asp Val Phe Gly Leu Val Pro Phe Glu Glu Ile Thr Gly
    930             935             940
Ser Gln Gln Gln Gln Lys Val Lys Gln Arg Ser Leu Gln Lys Leu Ser
945             950             955             960
Ser Arg Gln Arg Arg Thr Lys Gln Asp Val Ser Lys Ser Asn Gly Lys
            965             970             975
Arg His His Gly Thr Pro Thr Ser Ala Lys Lys Thr Leu Lys Pro Pro
            980             985             990
Tyr Arg Thr Pro Glu Arg Ala Arg Arg His Lys Lys Val Gly Arg Arg
        995             1000            1005
Asp Ser Gln Ser Ser Asn Glu Phe Leu Thr Ile Ser Asp Ser Lys Glu
    1010            1015            1020
Asn Ile Ser Val Ala Leu Thr Asp Gly Lys Asp Arg Ala Ser Val Leu
1025            1030            1035            1040
Pro Ser Asp Glu Ser Leu Leu Asp Pro Phe Gly Ala Lys Pro Phe His
            1045            1050            1055
Pro Pro Asp Leu Trp His Gln Pro His Gln Gly Leu Ser Asp Ile Cys
        1060            1065            1070
Val Asp His Thr Thr Ile Leu Pro Gly Arg Pro Arg Gln Asn Ser Val
        1075            1080            1085
His Gly Ser Phe His Ser Ala Glu Thr Leu Arg Met Asp Asp Phe Gly
    1090            1095            1100
Ala Val Pro Phe Thr Glu Leu Val Val Gln Ser Val Thr Pro Gln Gln
1105            1110            1115            1120
Ser Gln Pro Val Glu Leu Asp Pro Phe Gly Ala Ala Pro Phe Pro Ser
            1125            1130            1135
Lys Gln
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Leu Gly Gly Ala Ser Gly Arg Asp Gln Ser Asp Phe Val Gly Gln Thr
            20                  25                  30
Val Glu Leu Gly Glu Leu Arg Leu Arg Val Arg Arg Val Leu Ala Glu
        35                  40                  45
Gly Gly Phe Ala Phe Val Tyr Glu Ala Gln Asp Val Gly Ser Gly Arg
        50                  55                  60
Glu Tyr Ala Leu Lys Arg Leu Leu Ser Asn Glu Glu Glu Lys Asn Arg
65                  70                  75                  80
Ala Ile Ile Gln Glu Val Cys Phe Met Lys Lys Leu Ser Gly His Pro
                85                  90                  95
Asn Ile Val Gln Phe Cys Ser Ala Ala Ser Ile Gly Lys Glu Glu Ser
            100                 105                 110
Asp Thr Gly Gln Ala Glu Phe Leu Leu Leu Thr Glu Leu Cys Lys Gly
        115                 120                 125
Gln Leu Val Glu Phe Leu Lys Lys Met Glu Ser Arg Gly Pro Leu Ser
    130                 135                 140
Cys Asp Thr Val Leu Lys Ile Phe Tyr Gln Thr Cys Arg Ala Val Gln
145                 150                 155                 160
His Met His Arg Gln Lys Pro Pro Ile Ile His Arg Asp Leu Lys Val
                165                 170                 175
Glu Asn Leu Leu Leu Ser Asn Gln Gly Thr Ile Lys Leu Cys Asp Phe
            180                 185                 190
Gly Ser Ala Thr Thr Ile Ser His Tyr Pro Asp Tyr Ser Trp Ser Ala
        195                 200                 205
Gln Arg Arg Ala Leu Val Glu Glu Glu Ile Thr Arg Asn Thr Thr Pr
    210                 215                 220
Met Tyr Arg Thr Pro Glu Ile Ile Asp Leu Tyr Ser Asn Phe Pro Il
225                 230                 235                 240
Gly Glu Lys Gln Asp Ile Trp Ala Leu Gly Cys Ile Leu Tyr Leu Leu
                245                 250                 255
Cys Phe Arg Gln His Pro Phe Glu Asp Gly Ala Lys Leu Arg Ile Val
            260                 265                 270
Asn Gly Lys Tyr Ser Ile Pro Pro His Asp Thr Gln Tyr Thr Val Phe
        275                 280                 285
His Ser Leu Ile Arg Ala Met Leu Gln Val Asn Pro Glu Glu Arg Leu
    290                 295                 300
Ser Ile Ala Glu Val Val His Gln Leu Gln Glu Ile Ala Ala Ala Arg
305                 310                 315                 320
Asn Val Asn Pro Lys Ser Pro Ile Thr Glu Leu Leu Glu Gln Asn Gly
                325                 330                 335
Gly Tyr Gly Ser Ala Thr Leu Ser Arg Gly Pro Pro Pro Val Gly
        340                 345                 350
Pro Ala Gly Ser Gly Tyr Ser Gly Gly Leu Ala Leu Ala Glu Tyr Asp
        355                 360                 365
Gln Pro Tyr Gly Gly Phe Leu Asp Ile Leu Arg Gly Gly Thr Glu Arg
    370                 375                 380
Leu Phe Thr Asn Leu Lys Asp Thr Ser Ser Lys Val Ile Gln Ser Val
385                 390                 395                 400
Ala Asn Tyr Ala Lys Gly Asp Leu Asp Ile Ser Tyr Ile Thr Ser Arg
                405                 410                 415
Ile Ala Val Met Ser Phe Pro Ala Glu Gly Val Glu Ser Ala Leu Lys
            420                 425                 430
Asn Asn Ile Glu Asp Val Arg Leu Phe Leu Asp Ser Lys His Pro Gly
        435                 440                 445
His Tyr Ala Val Tyr Asn Leu Ser Pro Arg Thr Tyr Arg Pro Ser Arg
    450                 455                 460
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Phe His Asn Arg Val Ser Glu Cys Gly Trp Ala Ala Arg Arg Ala Pro
465   470   475   480
His Leu His Thr Leu Tyr Asn Ile Cys Arg Asn Met His Ala Trp Leu
            485   490   495
Arg Gln Asp His Lys Asn Val Cys Val Val His Cys Met Asp Gly Arg
            500   505   510
Ala Ala Ser Ala Val Ala Val Cys Ser Phe Leu Cys Phe Cys Arg Leu
            515   520   525
Phe Ser Thr Ala Glu Ala Ala Val Tyr Met Phe Ser Met Lys Arg Cys
    530   535   540
Pro Pro Gly Ile Trp Pro Ser His Lys Arg Tyr Ile Glu Tyr Met Cys
545   550   555   560
Asp Met Val Ala Glu Glu Pro Ile Thr Pro His Ser Lys Pro Ile Leu
            565   570   575
Val Arg Ala Val Val Met Thr Pro Val Pro Leu Phe Ser Lys Gln Arg
            580   585   590
Ser Gly Cys Arg Pro Phe Cys Glu Val Tyr Val Gly Asp Glu Arg Val
            595   600   605
Ala Ser Thr Ser Gln Glu Tyr Asp Lys Met Arg Asp Phe Lys Ile Glu
    610   615   620
Asp Gly Lys Ala Val Ile Pro Leu Gly Val Thr Val Gln Gly Asp Val
625   630   635   640
Leu Ile Val Ile Tyr His Ala Arg Ser Thr Leu Gly Gly Arg Leu Gln
            645   650   655
Ala Lys Met Ala Ser Met Lys Met Phe Gln Ile Gln Phe His Thr Gly
            660   665   670
Phe Val Pro Arg Asn Ala Thr Thr Val Lys Phe Ala Lys Tyr Asp Leu
    675   680   685
Asp Ala Cys Asp Ile Gln Glu Lys Tyr Pro   Phe Gln Val Asn
    690   695   ·0
Leu Glu Val Glu Val Glu Pro Arg Asp Arg Pro Ser Arg Glu Ala Pro
705   710   715   720
Pro Trp Glu Asn Ser Ser Met Arg Gly Leu Asn Pro Lys Ile Leu Phe
            725   730   735
Ser Ser Arg Glu Glu Gln Gln Asp Ile Leu Ser Lys Phe Gly Lys Pro
            740   745   750
Glu Leu Pro Arg Gln Pro Gly Ser Thr Ala Gln Tyr Asp Ala Gly Ala
    755   760   765
Gly Ser Pro Glu Ala Glu Pro Thr Asp Ser Asp Ser Pro Pro Ser Ser
    770   775   780
Ser Ala Asp Ala Ser Arg Phe Leu His Thr Leu Asp Trp Gln Glu Glu
785   790   795   800
Lys Glu Ala Glu Thr Gly Ala Glu Asn Ala Ser Ser Lys Glu Ser Glu
            805   810   815
Ser Ala Leu Met Glu Asp Arg Asp Glu Ser Glu Val Ser Asp Glu Gly
            820   825   830
Gly Ser Pro Ile Ser Ser Glu Gly Gln Glu Pro Arg Ala Asp Pro Glu
        835   840   845
Pro Pro Gly Leu Ala Ala Gly Leu Val Gln Gln Asp Leu Val Phe Glu
    850   855   860
Val Glu Thr Pro Ala Val Leu Pro Glu Pro Val Pro Gln Glu Asp Gly
865   870   875   880
Val Asp Leu Leu Gly Leu His Ser Glu Val Gly Ala Gly Pro Ala Val
            885   890   895
Pro Pro Gln Ala Cys Lys Ala Pro Ser Ser Asn Thr Asp Leu Leu Ser
            900   905   910
Cys Leu Leu Gly Pro Pro Glu Ala Ala Ser Gln Gly Pro Pro Glu Asp
            915   920   925

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Leu Leu Ser Glu Asp Pro Leu Leu Leu Ala Ser Pro Ala Pro Pro Leu
    930             935             940
Ser Val Gln Ser Thr Pro Arg Gly Gly Pro Pro Ala Ala Ala Asp Pro
945             950             955             960
Phe Gly Pro Leu Leu Pro Ser Ser Gly Asn Asn Ser Gln Pro Cys Ser
            965             970             975
Asn Pro Asp Leu Phe Gly Glu Phe Leu Asn Ser Asp Ser Val Thr Val
            980             985             990
Pro Pro Ser Phe Pro Ser Ala His Ser Ala Pro Pro Pro Ser Cys Ser
        995         1000             1005
Ala Asp Phe Leu His Leu Gly Asp Leu Pro Gly Glu Pro Ser Lys Met
    1010            1015            1020
Thr Ala Ser Ser Ser Asn Pro Asp Leu Leu Gly Gly Trp Ala Ala Trp
1025            1030            1035            1040
Thr Glu Thr Ala Ala Ser Ala Val Ala Pro Thr Pro Ala Thr Glu Gly
            1045            1050            1055
Pro Leu Phe Ser Pro Gly Gly Gln Pro Ala Pro Cys Gly Ser Gln Ala
            1060            1065            1070
Ser Trp Thr Lys Ser Gln Asn Pro Asp Pro Phe Ala Asp Leu Gly Asp
            1075            1080            1085
Leu Ser Ser Gly Leu Gln Gly Ser Pro Ala Gly Phe Pro Pro Gly Gly
    1090            1095            1100
Phe Ile Pro Lys Thr Ala Thr Thr Pro Lys Gly Ser Ser Ser Trp Gln
1105            1110            1115            1120
Thr Ser Arg Pro Pro Ala Gln Gly Ala Ser Trp Pro Pro Gln Ala Lys
            1125            1130            1135
Pro Pro Pro Lys Ala Cys Thr Gln Pro Arg Pro Asn Tyr Ala Ser Asn
            1140            1145            1150
Phe Ser Val Ile Gly Arg Glu Glu Arg Gly Val Arg Ala Pro Ser
            1155            1160            1165
Phe Ala Gln Lys Pro Lys Val Ser Glu Asn Asp Phe Glu Asp Leu Leu
    1170            1175            1180
Ser Asn Gln Gly Phe Ser Ser Arg Ser Asp Lys Lys Gly Pro Lys Thr
1185            1190            1195            1200
Ile Ala Glu Met Arg Lys Gln Asp Leu Ala Lys Asp Thr Asp Pro Leu
            1205            1210            1215
Lys Leu Lys Leu Leu Asp Trp Ile Glu Gly Lys Glu Arg Asn Ile Arg
            1220            1225            1230
Ala Leu Leu Ser Thr Leu His Thr Val Leu Trp Asp Gly Glu Ser Arg
            1235            1240            1245
Trp Thr Pro Val Gly Met Ala Asp Leu Val Ala Pro Glu Gln Val Lys
1250            1255            1260
Lys His Tyr Arg Arg Ala Val Leu Ala Val His Pro Asp Lys Ala Ala
1265            1270            1275            1280
Gly Gln Pro Tyr Glu Gln His Ala Lys Met Ile Phe Met Glu Leu Asn
            1285            1290            1295
Asp Ala Trp Ser Glu Phe Glu Asn Gln Gly Ser Arg Pro Leu Phe
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<220>
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